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10/576,550	04/19/2006	Ichirou Satou	40221	3769

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EXAMINER	
FANG, PAKEE	

ART UNIT	PAPER NUMBER
2629	

NOTIFICATION DATE	DELIVERY MODE
05/14/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/576,550	SATOU ET AL.	
	Examiner	Art Unit	
	PAKEE FANG	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-10* is/are pending in the application.

4a) Of the above claim(s) *6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 February 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on February 06, 2009 has been entered and considered by examiner. Claims 1 – 5, and 7-10 are presented for examination. Claim 6 is canceled.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the application filed on 04/19/2006.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoneda. (20010026260).

In regard to claim 1, Yoneda (Figs. 2, & 39) discloses a mobile terminal (10) apparatus comprising: a display portion (100 or 11) to be driven by a voltage (V) applied thereto [0103 & 0135]; and a display portion driving control unit (135) which changes driving operation of the display portion by selecting either an interlaced scanning drive system (interlace scanning mode) or a sequential scanning drive system (sequential scanning mode) for driving the display portion (Figs. 36-38) [0203, 0207-0213], and

wherein the change of the driving operation is based on an operation condition of the apparatus itself (the selection of driving operation is based on the kind of data to be displayed of the apparatus) (Figs. 26-27) [0113] wherein when the display portion driving control unit changes the driving operation [0203], the display portion driving control means changes display contents (Fig. 48 changes the contents) of the display portion before or after the change of the driving operation (The switching of driving operation is based on the kind of data to be displayed [0199]. Fig. 48 shows the image changes from interlace to sequential back to interlace scanning [0233] and furthermore, interlace scanning starts only starts after the finish of previous frame or image Fig. 13 [0213]).

In regard to claim 5, Yoneda (Figs. 2, & 39) discloses wherein when the display portion driving control unit (135) changes the driving operation [0203], the display portion driving control unit carries out the driving operation change in a period (switching period) after scanning one screen (48a or 48b) in the display portion is completed and before scanning a next screen (48b or 48c) is started (The switching of driving operation is based on the kind of data to be displayed [0199]. Fig. 48 shows the image changes from *interlace*/sequential after the image *48a* or 48b being completed to *sequential*/interlace scanning, and use *sequential*/interlace scanning to conjure up the image *48b* or 48c [0233] and furthermore, interlace scanning only starts after the finish of previous frame or image Fig. 13 [0213]).

In regard to claim 9, Yoneda (Figs. 28) discloses wherein the interlaced scanning drive system is a three-line interlace drive (Fig. 28 shows the interlace scanning performs interlace

operation every three lines).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda (20010026260) in view of Tsuboyama (5606343).

In regard to claim 2, Yoneda (Figs. 12-14) discloses wherein the display portion driving control unit changes the drive system so as to drive the display portion by sequential scanning or interlace scanning during motion picture or still picture [0113 or 0199], but Yoneda does not explicitly teach sequential scanning when movie display is performed, and to drive the display portion by interlaced scanning when another display is performed.

However, Tsuboyama discloses when video data during normal operation is accomplished by sequential scan and screen scrolling, total screen refreshing operation is accomplished by interlace scan (Col. 4 lines 23-47). Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to combine the sequential scanning or interlace scanning use during motion picture or still picture of Yoneda with the sequential scanning use during video data and interlace scanning use during other operations of

Tsuboyama to ease the degradation of image quality and improve reliability (Tsuboyama, Col. 2 lines 8-13).

In regard to claim 7, Yoneda (Figs. 12-14) discloses wherein the display portion driving control unit changes the drive system so as to drive the display portion by sequential scanning or interlace scanning during motion picture or still picture in accordance with the operation condition [0113 or 0199] and using a set of voltage on Fig. 5 for interlace scanning, but Yoneda does not explicitly teach another set of driving voltage of the display portion for the sequential scanning. However, Tsuboyama discloses (Fig. 2) a set of different voltage for sequential scanning. Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to combine the sequential scanning or interlace scanning use during motion picture or still picture and the interlace scanning voltages of Yoneda with the sequential scanning voltages use for scanning of Tsuboyama to ease the degradation of image quality and improve reliability (Tsuboyama, Col. 2 lines 8-13).

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda (20010026260) in view of Tsuboyama (5606343) and further in view of Nishimura (20030013484).

In regard to claim 3, Yoneda (Figs. 12-14) discloses wherein the display portion driving control unit changes the drive system so as to drive the display portion by sequential scanning or interlace scanning during motion picture or still picture [0113 or 0199]; and Tsuboyama

discloses when video data during normal operation is accomplished by sequential scan and screen scrolling, total screen refreshing operation is accomplished by interlace scan (Col. 4 lines 23-47), but Yoneda and Tsuboyama do not explicitly disclose sequential scanning in a camera mode for operating a camera,

However, Nishimura (1) discloses a moving picture or video data use by the camera (23) on the LCD of the display section, and the operation mode can change from camera mode to other operation modes on the display [0057]. Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to combine the sequential scanning or interlace scanning use during motion picture or still picture of Yoneda with the sequential scanning use during video data and interlace scanning use during other operations of Tsuboyama with the video data being received by camera onto the LCD of Nishimura to ease the degradation of image quality and improve reliability (Tsuboyama, Col. 2 lines 8-13) and to provide more functional operations for the display device.

In regard to claim 4, Yoneda (Figs. 12-14) discloses wherein the display portion driving control unit changes the drive system so as to drive the display portion by sequential scanning or interlace scanning during motion picture or still picture [0113 or 0199]; and Tsuboyama discloses when video data during normal operation is accomplished by sequential scan and screen scrolling, total screen refreshing operation is accomplished by interlace scan (Col. 4 lines 23-47), but Yoneda and Tsuboyama do not explicitly disclose sequential scanning in a camera mode for operating a camera,

However, Nishimura (1) discloses a moving picture or video data use by the camera (23) on the LCD of the display section, and the operation mode can change when camera mode terminated and shift to other operation modes on the display [0057]. Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to combine the sequential scanning or interlace scanning use during motion picture or still picture of Yoneda with the sequential scanning use during video data and interlace scanning use during other operations of Tsuboyama with the termination of camera mode and shifting to another mode of operation of Nishimura to ease the degradation of image quality and improve reliability (Tsuboyama, Col. 2 lines 8-13) and to provide more functional operations for the display device.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda (20010026260) in view of Zehner (20030137521).

In regard to claim 8, Yoneda (Figs. 12-14) discloses wherein the display portion driving control unit changes the drive system so as to drive the display portion by sequential scanning or interlace scanning during motion picture or still picture [0113 or 0199]; but Yoneda does not explicitly disclose a frame inversion when the apparatus itself is in a standby state. However, Zehner discloses using frame inversion techniques during a sleep mode to conserve power [0136-0139]. Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to combine the sequential scanning or interlace scanning use during

motion picture or still picture of Yoneda with the frame inversion during the sleep mode of Zehner to conserve energy and increase the lifetime of the driver (Zehner, [0139]).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda (20010026260) in view of Aoki (6307681).

In regard to claim 10, Yoneda (Figs. 12-14) discloses wherein the display portion driving control unit changes the drive system so as to drive the display portion by sequential scanning or interlace scanning during motion picture or still picture [0113 or 0199]; but Yoneda does not explicitly disclose a sequential scanning drive system is a one- line inversion drive or a frame inversion drive.

However, Aoki discloses (Figs. 4, 6 & 7) a sequential scanning drive system is using one line inversion drive (Col. 18 lines 32-37 and Col. 21 lines 1-18). Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to combine the sequential scanning or interlace scanning use during motion picture or still picture of Yoneda with the sequential scanning for one line inversion of Aoki to reduce pixel degradation due to constant driving, thus increase the lifespan of the display.

Response to Arguments

Applicant's arguments with respect to claims 1-15, and 7-10 have been considered but are moot in view of the new ground(s) of rejection.

In view of amendment, the references of Tsuboyama, Nishimura, Zehner, and Aoki have been used for new ground of rejections.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAKEE FANG whose telephone number is (571)270-7219. The examiner can normally be reached on Mon-Friday 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAKEE FANG/
Examiner, Art Unit 2629

/Chanh Nguyen/
Supervisory Patent Examiner, Art Unit 2629